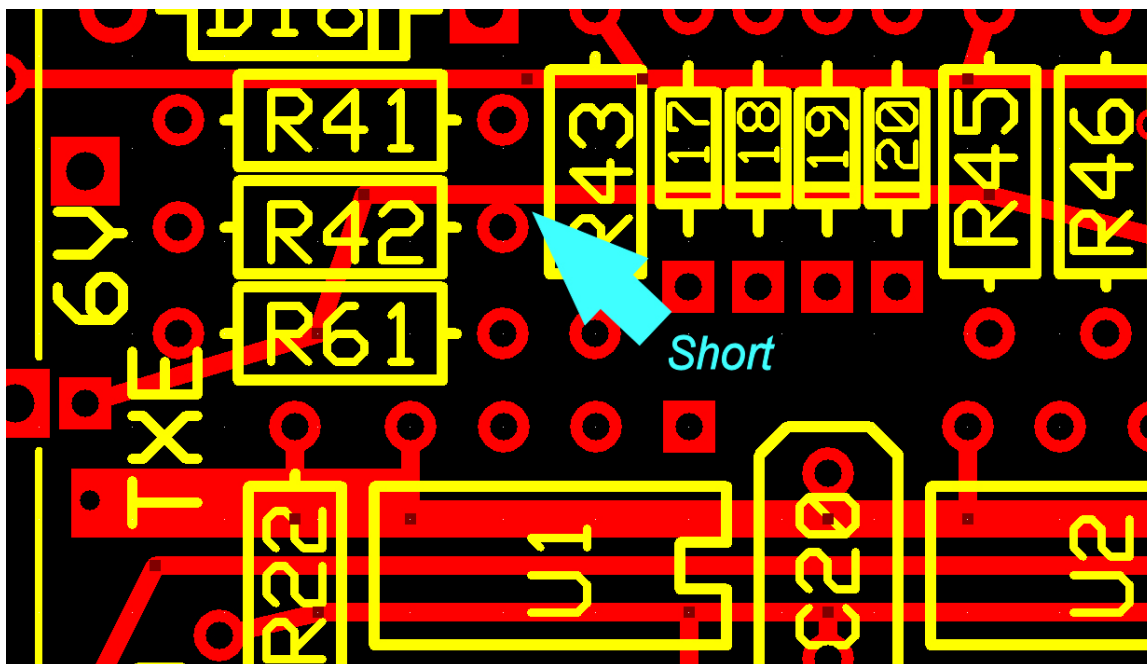


An Even More Fool-Resistant Conditional Sequencer

Errata November 2012

I thought all the errors in the 2009 boards were fixed in the batch of boards marked **W1GHZ 2011a**, but one new error crept in. As shown in the sketch below, one R42 pad is shorted to the adjacent trace on the top side of the board. Since R42 only connects to a trace on the back side (not shown), this is easily fixed with an X-Acto knife by cutting away part of the topside pad to remove the short.



One other minor problem is U9. The parts list showed a TL431, while the schematic showed an LT1009, functionally equivalent, but with a different pinout. The board footprint is for the TL431.

A few component issues:

- R61 was added in the 2011a revision, so is not in the original parts list. Nominal value is 27K.
- C32 is on the board, but not in the schematic. On closer inspection, C12 in the schematic is actually C32, and C12 is the missing part. Fortunately, both are the same value, nominal 1800 pf or whatever you have on hand. C12 has been added to schematic.
- Q8 was listed as an IRF9410, chosen because it was the cheapest FET in the DigiKey catalog that does the job. It is no longer available in thru-hole package. The IRF530 is one alternative, but any FET with adequate current rating and a voltage rating of at least twice the relay voltage will do. Since the FET is a

switch, power dissipation is not high, so other packages that don't have the heat sink tab should be OK.

- Q7 and Q9, P-channel power FETs – many alternatives possible, like Q8, just look at the voltage and current ratings.

The two wire connections for +12V and +6V shown in the 2009 errata are still required.

Errata October 2009

There were a few errors that crept into the first pass of boards, marked W1GHZ 2009 on the back as shown in the sketch below.

1. Some part values have been adjusted – make sure parts list is dated October 2009 or later.
2. Q6 silkscreen is backwards. Insert part opposite of direction shown if using option 8, external TR relay contacts.
3. Q6 needs a pullup resistor from drain to +6 volts if using option 8. Shown as R101, 27K, in latest schematic, but no board location. Probably tack on bottom of board.
4. The board has several errors in the copper traces on the bottom, which require cutting the trace with an X-Acto knife or Dremel tool, then adding wires to correct the wiring. In the sketch below, the copper traces on the bottom of the board are shown in blue. Red lines indicate where to cut the traces, and green lines are wires that must be added. The lead of R7 nearest to the cut is bent to a new location rather than adding an additional wire.

